Andalas University
Faculty of Engineering
Department of Environmental Engineering

Environmental Engineering Undergraduate Program

ABET Course Syllabus
Odd Semester 2018/19

1. *Course number and name*
   TLI 132: Introduction of Environmental Science

2. *Credits and contact hours*
   2 Credit Hours

3. *Instructor's or course coordinator's name*
   Instructor : Ir. Yenni Ruslinda, MT, Taufiq Ihsan, MT; Rinda Andhita Regia, MT, Lecturer of Environmental Engineering
   Course coordinator : Ir. Yenni Ruslinda, MT, Lecturer of Environmental Engineering

4. *Text book, title, author, and year*
   Text book
   Mihelcic, *Fundamentals of Environmental Engineering*
   Weidner. *Environmental Engineering* 4th edition, McGraw-Hill

5. *Specific course information*
   a. brief description of the content of the course (catalog description)
   Definition and scope of Environmental Engineering, Water management (water and wastewater), Waste management, Management of air quality, Management of environmental health

   b. prerequisites or co-requisites
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   c. indicate whether a required, elective, or selected elective course in the program
   Required course for Environmental Engineering

6. *Specific goals for the course*
   a. *Specific outcomes of instruction*
   Upon completion of this course, students will be able to:
      i. Students will determine and explain definition and scope of Environmental Engineering
      ii. Students will determine and explain classification , resource management and the importance of water and waste water
      iii. Students will determine and explain, classification, sources, and the importance of waste management
      iv. Students will determine and explain classification , sources and impacts air management
      v. Students will determine and explain classification, sources, impact and management of environmental health
      vi. Students will demonstrate case related to environmental engineering

   b. *Explicitly indicate which of the student outcomes listed in Criterion 3 or any other outcomes are addressed by the course*
   Course addresses/ supports ABET Student Outcome(s): a, b, c, d, e, f, g, j, k

Course Learning Outcomes mapped to ABET Student Outcomes:

No	Course Learning Outcomes	ABET Student Outcomes
i.	Students will determine and explain definition and scope of Environmental Engineering	a, j
ii.	Students will determine and explain classification , resource management and the importance of water and waste water	a, c, e, j
iii.	Students will determine and explain, classification, sources, and the importance of waste management	a, c, e, j
iv.	Students will determine and explain classification , sources and impacts air management	a, c, e, j
v.	Students will determine and explain classification, sources, impact and management of environmental health	a, c, e, j
vi.	Students will demonstrate case related to environmental engineering	a, b, c, d, e, f, g, h, k

7. *Brief list of topics to be covered*
   i. Definition and scope of Environmental Engineering
   ii. Classification , resource management and the importance of water and waste water
   iii. Classification, sources, and the importance of waste management
   iv. Classification , sources and impacts air management
   v. Classification, sources, impact and management of environmental health
   vi. Case related to environmental engineering

Topics (Weekly Outlines):

Week	Topic
1	Definition and scope of Environmental Engineering
2	Profession Ethical of Environmental Engineering
3	Classification of water and waste water
4	Resource management of water and waste water
5	Importance of water and waste water
6	Classification and sources of solid waste
7	Importance of waste management
8	**Mid Term Exams**
9	Classification , sources and impacts air management - 1
10	Classification , sources and impacts air management - 2
11	Classification, sources, and impact in environmental health - 1
12	Classification, sources, and impact in environmental health – 2
13	Management of environmental health
14	Case related to environmental engineering – 1
15	Case related to environmental engineering – 2
16	**Final Term Exams**

The length of one session: **100 minutes**

Assessment and Evaluation Criterion:

No	Course Learning Outcomes	Methods of Assessment
i.	Students will determine and explain definition and scope of Environmental Engineering	Quiz #1
ii.	Students will determine and explain classification , resource management and the importance of water and waste water	Assignment #1, Homework #1, Mid Term Exams
iii.	Students will determine and explain, classification, sources, and the importance of waste management	Assignment #2, Homework #2, Mid Term Exams
iv.	Students will determine and explain classification , sources and impacts air management	Assignment #3, Homework #3, Final Term Exams
v.	Students will determine and explain classification, sources, impact and management of environmental health	Assignment #4, Homework #4, Final Term Exams
vi.	Students will demonstrate case related to environmental engineering	Presentation, Group Report, Participation in Group, Final Term Exams

Evaluation Criterion:

Mid Term Exams	30 points
Final Term Exams	30 points
Assignments, Home works	30 points
Quiz	10 points

Maximum points: 100 points

Grading will be as follows:

Final points	Grade	Final points	Grade
≥ 85	A	≥ 60 - < 65	C^+
≥ 80 - < 85	A^-	≥ 55 - < 60	C
≥ 75 - < 80	B^+	≥ 40 - < 55	D
≥ 70 - < 75	B	0 - ≤ 40	E
≥ 65 - < 70	B^-		

Prepared by: Ir. Yenni Ruslinda, MT
Date of preparation: 01 September 2017

Approved by:
Date of Approval: 01 September 2017